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NASIS

NEBRASKA ANNUAL SOCIAL INDICATORS SURVEY

Bureau of Sociological Research
Department of Sociology
University of Nebraska–Lincoln
Lincoln, Nebraska 68588-0325
Telephone: (402) 472-3672

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ANGLING IN NEBRASKA

Gene Zuerlein

Nebraska Game and Parks Commission

and

Helen A. Moore

Bureau of Sociological Research, Department of Sociology

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The Nebraska Annual Social Indicators Survey

Helen A. Moore, 1983 Study Director

The findings in this report are based on data collected in the seventh Nebraska Annual Social Indicators Survey (NASIS). This survey is part of an on-going study of the quality of life in Nebraska conducted by the Bureau of Sociological Research at the University of Nebraska-Lincoln.

In 1983, a representative sample of 1834 Nebraskans eighteen years of age or older living in households was interviewed by telephone. The respondents to the 1983 survey are the fourth wave of a panel originally selected and interviewed in 1977, re-interviewed in 1979, and 1981, and supplemented by the 1982 cross-sectional survey respondents who were new migrants to the state or who had become adults (18) after 1980. These respondents will be reinterviewed every two years in order to provide information on changing quality of life. The interviews averaged approximately 45 minutes and included questions about health, political interests, energy conservation, occupation, recreation, education, family life and other matters reflecting the quality of life experienced in the state. For the entire sample, 95 out of 100 times the percentages computed from the items asked on the survey are likely to be accurate within plus or minus 2.25 percent of the figure that would have been obtained if each adult in Nebraska had been surveyed. This is an estimate of maximum error and for most items the percentages are likely to be even more accurate.

The data gathered by NASIS are used by a wide variety of State and local government agencies for policy and program plan- ning and by faculty and students at the University of Nebraska and other colleges for research. No information identifying any respondent is released to any users and the strict confidenti- ality of individual respondents is rigidly enforced. While the final responsibility for the organization and structure of the survey and for reports produced under its name rests with the Bureau of Sociological Research, public agencies and University departments play an integral part in planning the survey through an Advisory Committee. Public organizations interested in mem- bership on the Advisory Committee should contact the NASIS Study Director.

Funding for NASIS comes from the University of Nebraska, the Bureau of Sociological Research, and State and local agencies which buy items and data analysis from the survey.

The NASIS surveys are repeated each year to measure changes in the quality of life in Nebraska. While there is a core of questions which is included every year, each survey has a large component of unique items which address specific topical issues. Plans for future years include interviewing a new sample of Nebraskans in 1984 as well as continuing to reinterview the 1977 panel every two years to assess changes in their lives. Addi- tional detail on the NASIS surveys regarding use of the survey data or cost of purchasing items on future surveys can be ob- tained by contacting David R. Johnson, NASIS Study Director, at the Bureau of Sociological Research or by sending for a copy of the 1984 NASIS Prospectus.

ANGLING IN NEBRASKA

Development of water resources over the past 100 years has been instrumental in providing a rich agricultural economy in Nebraska. Associated with this development, fishery stocks have been planted and nourished, especially in reservoir environments, under the multiple use concept. With increased emphasis on future development of existing water resources, including both surface and groundwater, it is imperative that management objectives be attuned even closer to consumer needs and the ability of the aquatic environments to sustain an optimum fishing harvest. One of the best ways to enhance and perpetuate fishery resources is to obtain fishery use and demand information so that the needs of the using public are known. This will become increasingly important in the decades of the 1980's and 1990's as programs in the Fisheries Division of the Nebraska Game and Parks Commission continue to be refined and implemented to best satisfy angler needs.

SUMMARY

During 1981 and 1982 information on fishing activities by Nebraska residents was gathered in a joint project by the Fisheries Division of the Game and Parks Commission and the Bureau of Sociological Research of the University of Nebraska, Lincoln. The primary interest was to gauge the range of fishing activities as well as attitudes and needs of Nebraska anglers.

The instruments used included a telephone survey of approximately 1800 Nebraska adults 18 years of age and older to identify their 1981 fishing activities. These adult respondents were also

asked information about the recreational fishing activities of a randomly selected child (between the ages of 6 and 17) within their household. At the close of the telephone survey, these respondents were asked if they would be willing to participate in a more detailed follow-up mail survey the next year to track their 1982 fishing activities.

Nebraska adults fish predominately instate (70.7%), although 18.4% fish both Nebraska and other states. Some 11.0% of our respondents indicated that they fish only other states. Overall, an estimated 543,787 Nebraskans fished at least once during that calendar year, 1981. Of these, 369,352 were adults (age 18 and over) and 174,435 were children (age 6 through 17). The overall adult participation rate was 33.0% while children participated at an even higher rate of 58.0%.

The recreational patterns of Nebraskans who fish are significant given that fishing was rated the third most popular recreational activity by all respondents to the telephone survey in 1982. Nebraskans who do fish, fished an average of 19.4 days in the sample year, and children an average of 14.3 days. Not surprisingly, the peak fishing months for all respondents were June and July. The statistics presented in Table 1 indicate that a stalwart percentage, including children, are still fishing in the wintry months of November through March.

Overall, an estimated 9.7 million total fishing trips were taken in 1981. Adults enjoyed 75.0% of these trips while children accounted for 25.0%. As indicated in Table 2, seventy-one percent of the statewide trips were on lakes and reservoirs and 29.0% were on streams and rivers. This should not be construed to mean that

emphasis for fishing resources be placed on reservoirs entirely. Historically large sums of public money have been spent to build multiple use reservoirs where public access is provided. Streams and rivers, on the other hand, have a better distribution throughout the state for the angler. These running waters and the fish in them are public resources but access is somewhat limited because the land under streams and rivers is privately owned . It should be emphasized that as ecosystems, these streams, rivers and reservoirs go hand-in-hand; that is, each feeds the other.

In the mail-back survey, detailed information on the type of fish and location of fishing activities was collected. An estimated 10,618,839 fish were harvested in 1982 (see Table 3). Children took 18.3% of this catch and adults took 81.7%. This harvest estimate represents a 26.3% decline from the 1975 estimated harvest of 14,407,026 fish. However, it should be noted that these estimates are taken from a sub-sample of the original random telephone survey, and these findings should be conservatively interpreted. Nonlicensed anglers between age six and fifteen harvested 15.7% of the total and principally cropped bluegill, largemouth bass, and crappie as well as ten other species. Catfish, crappie and bluegill were the top three species taken home by adults in addition to twelve other species.

No expenditure information was asked in these surveys. However, the 1980 National Survey on fishing determined that the average expenditure per angler per year was $256.97 for Nebraska anglers aged sixteen years and older. If we assume that children spent the same amount it would mean that resident Nebraskan anglers spent nearly $140,000,000 in Nebraska's economy during

1981. Any calculated multiplier effects would need to be added on to this figure.

The impact of recreational fishing on the Nebraska economy is self-evident. Given the overwhelming percentage of fishing activities which take place on public waters, instate water resource management must then be adequate if Nebraskans are to continue pursuing this important activity which they see as part of the "good life".

REGULATING WATER RESOURCES

Nebraskans did express concern about the regulation of water resources which might influence their fishing activities. Of particular interest to Nebraskans is the availability of instream flows, or the lack thereof, on Nebraska streams and rivers. In the 1982 mailback survey the following question was asked:

> "Would you approve or disapprove legislation which would set certain water levels in Nebraska's streams and rivers to protect fish, wildlife, and other instream uses?"

Eligible responses ranged from strongly approve to strongly disapprove and no opinion (see Table 4). The majority of respondents (79.8%, 95% confidence interval $\pm$ 5.37%) strongly or somewhat approved of the state setting water levels in Nebraska streams and rivers. These findings were substantiated by a University of Nebraska survey of extension agents, government employees, and the general public in 1983 which reflected similar support for such legislation. Section 2-1586 and 37-435 Revised Statutes of Nebraska, 1943, 1984, Cumulative Supplement (Legislative Bill #1106) will go into effect February 15, 1985, and time will tell if this measure proves to be effective.

Certainly, it is the first step toward managing Nebraska's rivers and reservoirs as ecosystems to be protected and enjoyed by future generations.

In February 1973 the Nebraska Game and Park Commission officially adopted objectives and policies for general outdoor recreation and fish and wildlife. The objective for the latter is "To perpetuate and enhance the fish and wildlife resources of Nebraska for recreational, esthetic, educational and scientific use by Nebraskans and their visitors". Although these are attainable goals set by the Commission, the State of Nebraska to date has no overall goal on how to manage its water resources. This has led to considerable friction among state agencies mandated to carry out specific activities.

THE NEBRASKA ANGLER

A variety of age, income, and education backgrounds are evident as are the occupations of the Nebraska angler (see Table 8). Males participate in fishing activities more than females by a ratio of two to one. The majority of anglers (76.7%) reside in Standard Metropolitan Statistical Areas (Bureau of Census definition for Omaha, Lincoln, and adjacent areas) and urban communities (2,500 to 100,000 population). Rural anglers make up 23.3% of all adult anglers.

Nebraskans enjoyed an estimated 4,643,922 boating trips in 1981. About 41.0% of these trips involved fishing. Boat fishing trips also represented 20.0% of the approximatly 9.7 million statewide fishing trips in 1981. The majority of boating adults

(68.0%) boated in Nebraska only, 15.2% boated both in Nebraska and other states, and 16.8% stated they only boated outside of Nebraska.

As noted earlier, fishing generally occurs throughout the year with the vast majority of residents fishing between April and September. June and July are typically peak months but weather conditions may sometimes dictate a shift to some other month.

The majority (87.0%) of respondents drove less than 100 miles to take a fishing trip (Table 6). This does not mean that they never took longer trips -- only that the majority of their trips were short. Correspondingly, thirteen percent of respondents were willing to drive more than 100 miles to fish.

When questioned in detail about their catch, Nebraskans showed a considerable amount of variability in their fishing successes. Children (youths age 6 through 17) principally harvested bluegill (23.7%), largemouth bass (22.6%), and crappie (16.7%) while adults (age 18 and above) harvested catfish (25.0%), crappie (24.1%), and bluegill (11.7%) (Table 5). When combined, the top three species harvested in the state were crappie (22.8%), catfish (21.2%), and bluegill (13.9%) (Table 6).

ADOPTING A "STATE FISH"

Nebraska currently has no official state fish. Respondents were asked in the 1982 mail-back survey to indicate their preference if such a fish were to be identified. The number one choice by both adult and child anglers (Table 7) is the channel catfish, which was one fish they were most likely to have success in catching. Running a close second among adults were walleye and largemouth bass.

Conclusions

A wide range of Nebraskans have been and continue to pursue an important dimension of the "good life" through recreational fishing. This is evident not only from the fact that fishing occurs year-round, but from the fact that an estimated 543,787 Nebraskans fished at least once during calendar year 1981. This represents approximately one-third of the state's population and should attest to the importance people place on this activity. More directly, Nebraskans ranked fishing as the third most popular outdoor recreational activity behind walking and gardening.

The key to continuing the sport of fishing revolves around the three main ingredients of habitat, aquatic biota, and usage by Nebraskans. The latter two are of the utmost importance but nothing can be managed unless adequate habitats are maintained throughout Nebraska.

The complete report of this fishing survey can be obtained from the Fisheries Division, Nebraska Game and Parks Commission, 2200 N. 33rd Street/P. O. Box 30370, Lincoln, Nebraska, 68503.

Table 1. Percent Resident Anglers Who Fished By Month.

Month	1975 All Age Groups	1981 Adults	1982 Adults	1982 Children
			(Dec. 81) 4.1	1.9
January	7.1	4.6	(Jan. 82) 7.3	11.1
February	8.0	4.2	8.3	---
March	14.2	8.1	20.2	7.4
April	43.6	24.1	45.6	29.6
May	79.3	47.8	68.4	53.7
June	83.0	70.5	81.3	90.7
July	76.4	75.9	76.7	87.0
August	76.8	63.2	66.8	70.4
September	51.6	32.3	44.0	25.9
October	24.3	13.8	17.1	25.9
November	7.2	5.3	5.7	7.4
December	6.6	4.0	---	---

Table 2. Estimated Total Fishing Trips in Calendar Year 1981 by Residents Age Six and Above.

Water Type	Children	Adults	Total Trips	(Percent)
Rivers and Streams	706,283	2,143,822	2,850,105	(29.2)
Lakes and Reservoirs	1,776,355	5,146,362	6,922,717	(70.8)
	2,482,638 (25%)	7,290,184 (75%)	9,772,822	(100.0)

time needed for each question set. For many buyers, this procedure was repeated two or three times in order to trim time or to test revisions in the question wording.

It was our goal to keep the NASIS84 interview to a maximum of 45 minutes. Past experience suggests that this is the maximum length of interview that can be sustained without loss of data quality due to respondent (and interviewer) fatigue.

A significant change in the 1984 NASIS from previous years was the reduction in the targeted sample size to 900 interviews. In all previous NASIS surveys, the sample size was approximately 1800. The decision to go with 900 rather than 1800 interviews was resched on the basis of the funds available and the needs of the buyers. Several buyers were interested in only a one-half sample and other buyers found that their needs were better met by being able to purchase more minutes worth of questions on the survey, even if it meant a smaller sample size than usual. The reduction in sample size is intended as a one-year-only event. Plans to procede with the full sample size for the panel in 1985 are now underway.

An initial draft of the complete interview schedule was extensively pretested by professional interviewers. They were instructed to call households in Lincoln and in some smaller communities using the same procedures used for the regular survey. During the pretests interviewers were instructed to be particularly observant for problems in wording, item ordering, and skip patterns. Following the pretests, a debriefing meeting was held with the interviewers to go over the schedule item-by-item and to discuss problems encountered and reactions to the

Table 3. Estimated Annual Harvest of Fish by Children and Adults in 1982.*

Species	Children Number	(Percent)
Bluegill	460,746	(23.7)
Largemouth Bass	439,541	(22.6)
Crappie	325,997	(16.7)
White Bass	240,661	(12.4)
Bullhead	238,273	(12.2)
Trout	97,716	(5.0)
Catfish	80,113	(4.1)
Carp	15,760	(0.8)
Yellow Perch	11,122	(0.6)
Walleye	10,481	(0.5)
Northern Pike	6,550	(0.3)
Smallmouth Bass	548	(0.03)
Striped Bass	545	(0.03)
All Other Species	18,712	(0.96)
	1,946,765	(100.00)

Species	Adults Number	(Percent)
Catfish	2,167,842	(25.0)
Crappie	2,091,067	(24.1)
Bluegill	1,016,091	(11.7)
White Bass	837,970	(9.7)
Walleye	773,470	(8.9)
Largemouth Bass	725,942	(8.4)
Bullhead	274,159	(3.2)
Trout	226,788	(2.6)
Carp	178,708	(2.1)
Northern Pike	141,063	(1.6)
Smallmouth Bass	75,032	(0.9)
Yellow Perch	59,951	(0.7)
Striped Bass	28,212	(0.3)
Sauger	22,666	(0.3)
Paddlefish	6,209	(0.1)
All Other Species	46,904	(0.5)
	8,672,074	(100.00)

*Total estimated statewide harvest equals 10,618,839.

Table 3. Estimated Annual Harvest of Fish with Children and Adult Numbers Combined for 1982.

(continued)

Species	Number	(Percent)
Crappie	2,417,064	(22.8)
Catfish	2,247,955	(21.2)
Bluegill	1,476,837	(13.9)
Largemouth Bass	1,165,483	(11.0)
White Bass	1,078,631	(10.2)
Walleye	783,951	(7.4)
Bullhead	512,432	(4.8)
Trout	324,504	(3.0)
Carp	194,468	(1.8)
Northern Pike	147,613	(1.4)
Smallmouth Bass	75,580	(0.7)
Yellow Perch	71,073	(0.7)
Striped Bass	28,757	(0.3)
Sauger	22,666	(0.2)
Paddlefish	6,209	(0.1)
All Other Species	65,616	(0.6)
	10,618,839	(100.00)

Table 4. Response to Questions Asking if They Would Approve or Disapprove Legislation which Would Set Certain Water Levels In Nebraska's Streams and Rivers to Protect Fish, Wildlife, and Other Instreams Uses.

	Percent	Cummulative Frequency Percent
Strongly Approve	48.1	48.1
Somewhat Approve	31.7	79.8
Somewhat Disapprove	1.0	80.8
Strongly Disapprove	3.4	84.1
No Opinion	15.9	100.0

Table 5. Socioeconomic Characteristics of Adult Anglers Who Fished Nebraska Waters in 1981. (N=625)

	Percent
1. Sex	
Male	67.8
Female	32.2
2. Age	
18 - 34	43.5
35 - 59	38.8
60 and Over	17.7
3. Income	
$20,000 or More	54.3
Less Than $20,000	45.7
4. Education	
Less than High School	18.7
High School Diploma	59.1
Junior College	4.6
Bachelor's Degree	14.1
Masters Degree	3.4
5. Occupation	
Managerial	21.6
Craftsmen	11.0
Housewife	10.9
Farmer/Rancher	10.2
Professional	9.4
Service Worker	9.3
Clerical	8.3
Operatives (transportation,etc.)	7.2
Non-Farm Labor	5.0
Sales	4.9
Military	1.4
Farm Laborers	0.7
6. Residence	
Urban*	50.4
Omaha (SMSA)	19.0
Rural	
Farm or Ranch	15.6
Non-Farm	7.7
Lincoln (SMSA)	7.3

*Refers to communities between 2,500 and 100,000 population.

Table 6. Miles Driven for the Majority of Fishing Trips By Adults in 1982. (N=192)

	Percent	Cumulative Frequency Percent
Less Than 5 Miles	13.5	13.5
5 - 25 Miles	41.1	54.7
25 - 50 Miles	18.2	72.9
50 - 100 Miles	14.1	87.0
More than 100 Miles	13.0	100.0

Table 7. Preference for an Official State Fish by Anglers in 1982.

	Species	Adults (N=212) Percent
1.	Channel Catfish	18.9
2.	Largemouth Bass	14.2
3.	Walleye	13.2
4.	Crappie	10.8
5.	White Bass	5.7
6.	Rainbow Trout	3.3
7.	Paddlefish	2.8
8.	Bluegill	2.8
9.	Northern Pike	1.9
10.	Bullhead	1.9
11.	Carp	1.4
12.	Striped Bass	1.4
13.	Shiner Minnow	0.9
14.	Smallmouth Bass	0.5
15.	Red Gilled Guppie	0.5
16.	No Preference	19.8
		100.0

	Species	Children (N=45) Percent
1.	Channel Catfish	29.7
2.	Carp	10.2
3.	Smallmouth Bass	5.1
4.	Largemouth Bass	5.1
5.	Paddlefish	5.1
6.	Walleye	4.2
7.	Northern Pike	3.4
8.	Crappie	2.5
9.	Striped Bass	2.5
10.	Trout	1.7
11.	Drum	1.7
12.	Sauger	1.7
13.	No Preference	27.1
		100.0

List of reports already released using data gathered in the 1983 Nebraska Annual Social Indicators Survey. These may be purchased at the indicated price from the Bureau of Sociological Research at the University of Nebraska-Lincoln.

Report Number	Title
1	Designs, Procedures, Instruments and Forms for the 1983 NASIS. Helen A. Moore. Price: $7.50.
2	Effects of the Recession on Nebraskans. Alan Booth. Price: $1.00.
3	Nebraskans Attitudes on Taxing and Spending: An Examination of the 'More for Less' Paradox. Susan Welch. Price: $1.00.